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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,898	08/25/2003	Thomas H. Hebert	380803.00052	2334

7590

12/15/2004

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EXAMINER

ZEC, FILIP

ART UNIT PAPER NUMBER

3744

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

03

Office Action Summary

Application No.

10/647,898

Applicant(s)

HEBERT, THOMAS H.

Examiner

Filip Zec

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings were received on 8/3/2004. These drawings are acceptable.

Response to Arguments

2. Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection. As such, this Office Action is being made non-final to afford the applicants the opportunity to respond to the new grounds of rejection.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 4,040,268 to Howard. Howard discloses applicant's basic inventive concept, a dual circuit evaporator coil (10, FIG. 2), wherein individual circuits (16 and 18, FIG. 2) are constructed in a diagonal manner (FIG. 2) setting up the active coil to be in contact with the incoming air along the entire surface when the other coil is inactive (col 4, lines 23-33).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,040,268 to Howard. Howard discloses applicant's basic inventive concept, a dual circuit evaporator coil (10, FIG. 2), wherein individual circuits (16 and 18, FIG. 2) are constructed in a diagonal manner (FIG. 2) setting up the active coil to be in touch with the incoming air along the whole surface when the other coil is inactive (col 4, lines 23-33), substantially as claimed with the exception of stating that the alternating evaporator coils are intertwined. In the description of prior art, Howard teaches the use of two or more separate refrigeration systems wherein one system operates independent of the other (col 1, lines 47-68). In these applications in low heat load conditions, only one system is energized while the second is energized only when high heat load conditions dictate so. When two separate evaporators, arranged in an air path, are employed, they may be intertwined so that all of the air sees all of refrigerant, regardless of which circuit is in operation, or alternatively they may be separate heat exchangers for each circuit. In the case of intertwining evaporators of separate refrigerant circuits, poor humidity control results when only one circuit is operating due to higher overall evaporator temperatures. Therefore, it would have been obvious to one skilled in the art at the time invention was made to use two intertwined individual circuits, in an alternating manner, in

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order to have smaller evaporating surface resulting in a reduced compressor capacity and thus, effective energy saving (col 1, lines 15-20).

7. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,040,268 to Howard, in view of U.S. Patent 5,660,056 to Arai et al. Howard discloses applicant's basic inventive concept, a dual circuit evaporator coil, substantially as claimed with the exception of stating that the refrigerant in the circuit is flowing in a counter flow manner with respect to the incoming air. Arai shows a refrigerant in an evaporator circuit flowing in a counter flow manner with respect to the incoming air to be old in the art (col 4, lines 12-22). Therefore, it would have been obvious to one skilled in the art at the time invention was made from the teachings of Arai to modify the system of Howard to have the refrigerant in an evaporator circuit flowing in a counter flow manner with respect to the incoming air, in order to improve the efficiency of the product (col 4, lines 20-22).

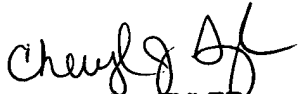
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Filip Zec whose telephone number is (571) 272-4815. The examiner can normally be reached on Monday through Friday, with the exception of every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Denise Esquivel can be reached on (571) 272-4808. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Filip Zec
Examiner
Art Unit 3744


CHERYL J. TYLER
PRIMARY EXAMINER

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